

LIQUID CHROMATOGRAPHIC METHOD AND SYSTEM

ABSTRACT OF THE DISCLOSURE

To economically perform preparatory chromatography, a plurality of pumps each having a corresponding one of a plurality of pistons and a corresponding one of a plurality of cylinders are driven by one motor to draw and pump solvent simultaneously into corresponding columns. To form a gradient, the pumps are connected to two-way valves that are connected alternately to a first solvent and a second solvent, whereby the time said valve is in a first position controls the amount of solvent drawn from the first reservoir into said pumps and the amount of time in said second position controls the amount of said second solvent drawn from the second reservoir into said pumps and the solvent is mixed in the pumping systems. The detectors are photodiodes mounted to light guides in the flow cells that generate signals related to light absorbance and communicate with a controller, whereby the controller receives signals indicating solute between the light guides and causes collection of solute. An over-pressure system compensates for pressure over a predetermined level.